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ABSTRACT OF THE DISCLOSURE

USE OF TRELLIS CODED MODULATION TO MITIGATE
FADING CHANNELS IN DATA TRANSMISSION OVER
AIR LINK WIRELESS CHANNELS OF GPRS/EDGE SYSTEMS

5   Disclosed is a system and method for improving
efficiency and overall capacity of data transmission
within a given bandwidth in a GPRS/EDGE wireless air-link
channel. A GPRS data terminal, mobile unit and/or other
end-user equipment is equipped with a (specially
10 designed) Trellis coder that replaces the traditional
cyclic coder and allows encoding and decoding of data via
the Trellis code algorithm. Trellis coder eliminates
errors in data transmission, increases capacity in a
given bandwidth, and corrects problems with fading
15 channels associated with wireless transmission. The
Trellis coder is also utilized for voice transmission and
may be fabricated on an integrated circuit for
utilization within hand-held devices.